

The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

Paper No. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KENNETH G. LEIB

Appeal No. 1998-1317
Application No. 08/522,112

ON BRIEF

Before HAIRSTON, FLEMING, and BARRY, ***Administrative Patent Judges***.

FLEMING, ***Administrative Patent Judge***.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 8-9, all of the claims pending in the present application. Claims 1-7 have been canceled.

The invention is directed to a technique for capturing and measuring the characteristics of blurred text imagery. Such measurements are used in conjunction with *a priori* information to enable blurred imagery to be interpreted with a

Appeal No. 1998-1317
Application No. 08/522,112

high degree of correctness, see page 3 of the specification.
Further, as discussed on page 9 of the specification, *a priori* information includes the average frequency of occurrence of all letters and the average distribution of word size in textual material in a given language.

The independent claim 8 is as follows:

8. A method for restoring a blurred printed document text image comprising the steps:

providing data of parameters for different fonts having varying point sizes;

providing a priori data regarding

(a) printed text structure including average size of words, sentences, and paragraphs for a preselected language;

(b) the average distribution of word size in textural material written in the preselected language;

(c) the average frequency of occurrence of all the letters in textual material written in the preselected language;

establishing predetermined zone characteristics for each letter of an alphabet of the language;

comparing each detected letter of printed text with the zone characteristics for establishing possible letters of words in the blurred text; and

determining the text on a word by word basis based on the a priori data and the established possible letters.

Appeal No. 1998-1317
Application No. 08/522,112

The Examiner relies on the following references:

Davida et al. (Davida)	4,275,265	Jun. 23,
1981 Guberman et al. (Guberman)	5,313,527	May
17, 1994		
Huttenlocher et al. (Huttenlocher)	5,384,863	Jan. 24,
1995		

Stroke, "Optical computing," IEEE Spectrum, 24-41 (Dec. 1972).

Russ, The Image Processing Handbook, 199-201 (2nd ed., Boca Raton, FL, CRC Press, Inc., 1995).

Claim 8 stands rejected under 35 U.S.C. § 103 as being unpatentable over Guberman in view of Huttenlocher and further in view of Davida and Stroke, and claim 9 stands rejected under 35 U.S.C. § 103 over the noted combination of references combined with Russ.

Rather than reiterate all arguments of Appellant and the Examiner, reference is made to the briefs¹ and answer for the respective details thereof.

OPINION

¹See the Appeal Brief filed May 29, 1997, and the Reply Brief filed October 16, 1997. Examiner mailed an Office communication on November 12, 1997, stating that the Reply Brief has been entered.

Appeal No. 1998-1317
Application No. 08/522,112

We will not sustain the rejection of claims 8-9 under 35 U.S.C. § 103.

The Examiner has failed to set forth a ***prima facie*** case. It is the burden of the Examiner to establish why one having ordinary skill in the art would have been led to the claimed invention by the express teachings or suggestions found in the prior art, or by implications contained in such teachings or suggestions. ***In re Sernaker***, 702 F.2d 989, 995, 217 USPQ 1, 6 (Fed. Cir. 1983). "Additionally, when determining obviousness, the claimed invention should be considered as a whole; there is no legally recognizable 'heart' of the invention." ***Para-Ordnance Mfg., Inc. v. SGS Importers Int'l, Inc.***, 73 F.3d 1085, 1087, 37 USPQ2d 1237, 1239 (Fed. Cir. 1995), ***cert. denied***, 117 S.Ct. 80 (1996) ***citing W.L. Gore & Assocs. v. Garlock, Inc.***, 721 F.2d 1540, 1548, 220 USPQ 303, 309 (Fed. Cir. 1983), ***cert. denied***, 469 U.S. 851 (1984).

On pages 6-9 of the brief, Appellant argues that Guberman, Huttenlocher, Stroke and Davida fail to teach Appellant's claimed limitations. In particular, Appellant argues that neither Guberman or Huttenlocher discloses

Appeal No. 1998-1317
Application No. 08/522,112

recognizing blurred text. The Appellant also asserts that Guberman fails to disclose specific elements of the claimed invention. Appellant particularly notes that the reference fails to disclose, teach, or suggest the

Appeal No. 1998-1317
Application No. 08/522,112

following elements: average size of words, sentences, and paragraphs; distribution of word size; and average frequency of letter occurrence, see page 6 of the brief.

Examiner responds to this argument by correctly noting that Guberman was not cited for disclosure of these features. Examiner directs attention to Stroke for a disclosure of recognizing blurred text and to Huttenlocher for a disclosure of: the recited elements of average size of words, sentences, and paragraphs; distribution of word size; and average frequency of letter occurrence.

As pointed out by our reviewing court, we must first determine the scope of the claim. "[T]he name of the game is the claim," ***In re Hiniker Co.***, 150 F.3d 1362, 1369, 47 USPQ2d 1523, 1529 (Fed. Cir. 1998). Moreover, when interpreting a claim, words of the claim are generally given their ordinary and accustomed meaning, unless it appears from the specification or the file history that they were used differently by the inventor. ***Carroll Touch, Inc. v. Electro Mechanical Sys., Inc.***, 15 F.3d 1573, 1577, 27 USPQ2d 1836, 1840 (Fed. Cir. 1993). Although an inventor is indeed free to

Appeal No. 1998-1317
Application No. 08/522,112

define the specific terms used to describe his or her invention, this must be done with reasonable clarity, deliberateness, and precision. ***In re Paulsen***, 30 F.3d 1475, 1480, 31 USPQ2d 1671, 1674 (Fed. Cir. 1994).

Claim 8 is directed to a method of restoring a blurred printed document text image. The claimed method recites use of a particular form of *a priori* data. This data specifically includes: the average size of words, sentences, and paragraphs for a preselected language; the average distribution of word size in textual material written in a preselected language; and the average frequency of occurrence of all letters in textual material written in a preselected language.

While we find that Stroke teaches deblurring of image data, there is nothing in the reference which would have taught or suggested use of this technique for deblurring text image data using the particular *a priori* data and hence the particular technique of claim 8.

A close review of Guberman, and Huttenlocher makes clear that neither reference teaches or suggests use of the

Appeal No. 1998-1317
Application No. 08/522,112

particular *a priori* data recited in claim 8. In his response to Appellant's argument alleging failure of Guberman to disclose the elements of average size of words, sentences, and paragraphs, distribution of word size, and average frequency of letter occurrence, Examiner directs attention to a subsequent discussion of Huttenlocher. Examiner's discussion of Huttenlocher begins of page 8 of the answer. In it, Examiner does not directly address Appellant's contention that the references fail to disclose particular elements recited in claim 8. Instead, Examiner appears to argue that certain portions of the reference "corresponds well with claim 8." (Answer, page 9). Examiner specifically points to col. 3, lines 46-65 of Huttenlocher which recites use of "image unit shape dimensions, typeface, font, location in the document image and frequency of image unit occurrence" (answer, page 9) used by Huttenlocher to "identify significant image units." (Col. 3, line 63).

However, the cited section does not disclose the specific elements alleged as missing by Appellant. A review of the sections of Huttenlocher cited in the actual rejection of

claim 8 also fails to disclose these elements. For example, Examiner directs attention to col. 8, lines 13-19 for a disclosure of the average size of word. See page 4 of the answer. The paragraph in which these lines are found begins in col. 7, at line 58. This section discusses the image characteristics used to identify classes of image units. A determination is then made as to whether or not the units are significant. Two criteria used to classify a unit as significant include frequency of occurrence and unit length. There is no discussion of an average length of the image unit. Hence no average size of words, sentences, and paragraphs as recited in claim 8 is disclosed. Examiner refers the reader (answer, page 4, bridging page 5) to col. 8, lines 52-66 for the disclosure of "different fonts having varying point sizes." Font size is, however, discussed by Huttenlocher as another image unit characteristic which can be used to identify classes to which the image unit belongs. While this disclosure may arguably relate to the step of providing a data of parameters for different fonts having varying point sizes recited in claim 8, it does not disclose the particular elements of: average sizes of words, sentences, and

paragraphs; distribution of word size; and average frequency of letter occurrence alleged as missing by Appellant.

On page 10 of the brief, Appellant argues that the references fail to provide motivation to combine their disparate teachings to meet the claimed limitations. Examiner in response directs attention to the Final Rejection reproduced in the answer.

The Federal Circuit states that "[t]he mere fact that the prior art may be modified in the manner suggested by Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." ***In re Fritch***, 972 F.2d 1260, 1266 n.14, 23 USPQ2d 1780, 1783-84 n.14 (Fed. Cir. 1992), ***citing In re Gordon***, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). It is further established that "[s]uch a suggestion may come from . . . the nature of [the] problem to be solved, leading inventors to look to references relating to possible solutions to that problem." ***Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc.***, 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1630 (Fed. Cir. 1996) ***citing In re Rinehart***, 531 F.2d 1048, 1054, 189 USPQ 143, 149

Appeal No. 1998-1317
Application No. 08/522,112

(CCPA 1976) (Considering the problem to be solved in a determination of obviousness). The Federal Circuit reasons in ***Para-Ordnance Mfg., Inc. v. SGS Importers Int'l, Inc.***, 73 F.3d 1085, 1088-89, 37 USPQ2d 1237, 1239-40 (Fed. Cir. 1995), that for the determination of obviousness, the court must answer whether one of ordinary skill in the art who sets out to solve the problem and who had before him in his workshop the prior art, would have reasonably expected to use the solution that is claimed by the Appellant. However, "[o]bviousness may not be established using hindsight or in view of the teachings or suggestions of the [invention]." ***Para-Ordnance Mfg., Inc. v. SGS Importers Int'l, Inc.***, 73 F.3d at 1087, 37 USPQ2d at 1239, ***citing W.L. Gore & Assocs. v. Garlock, Inc.***, 721 F.2d at 1551, 1553, 220 USPQ at 311, 312-13. In addition, our reviewing court requires the PTO to make specific findings on a suggestion to combine prior art references. ***In re Dembiczak***, 175 F.3d 994, 1000-01, 50 USPQ2d 1614, 1617-18 (Fed. Cir. 1999).

Motivation to make use of elements found in Huttenlocher in the Guberman system is articulated on page 5 of the answer.

Appeal No. 1998-1317
Application No. 08/522,112

Examiner asserts that col. 5, lines 9-15 of Huttenlocher provide motivation to combine the teachings of Guberman and Huttenlocher. However, this section of the reference merely discusses the importance of automatically emphasizing selected sections of text of a document image. Suggested use of the emphasizing techniques identified in this section include highlighting significant words or phrases in a document produced by electrostatographic reproduction machines or printers. Guberman is directed to recognition of cursive writing. Upon our review, we find that Examiner has not met the burden of showing evidence that one of ordinary skill in the art would have been led to use of the particular techniques for identifying significant image units taught by Huttenlocher in a system for recognizing cursive writing as disclosed by Guberman.

Appeal No. 1998-1317
Application No. 08/522,112

In view of the foregoing, we have not sustained the rejection of claim 8, and hence of claim 9 which depends therefrom. Accordingly, the Examiner's decision is reversed.

REVERSED

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KENNETH W. HAIRSTON)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
MICHAEL R. FLEMING)	
Administrative Patent Judge)	APPEALS AND
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MRF:hh

Appeal No. 1998-1317
Application No. 08/522,112

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